**Directions:** Use the resources listed below to answer the following questions.

1. What is potable water and why is it important to have this type of water?
2. What are the steps in water treatment?
3. What happens during each step in the water treatment cycle?
4. Using some of the resources given, find the information to fill in the chart below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Substance** | **Maximum Contaminant Level** | **Maximum Contaminant Goal** | **Source of Substance** | **Health Risks** |
| Lead |  |  |  |  |
| Mercury |  |  |  |  |
| Coliforms |  |  |  |  |
| Arsenic |  |  |  |  |
| Turbidity |  |  |  |  |
| Sulfur |  |  |  |  |
| Chlorine |  |  |  |  |
| Viruses |  |  |  |  |
| Asbestos |  |  |  |  |
| Nitrates/Nitrites |  |  |  |  |
| Cyanide |  |  |  |  |
| Uranium |  |  |  |  |
| Copper |  |  |  |  |
| Fluoride |  |  |  |  |
| Dissolved Solids |  |  |  |  |
| Zinc |  |  |  |  |
| Barium |  |  |  |  |

***Additional Resources***

<http://water.epa.gov/learn/kids/drinkingwater/watertreatmentplant_index.cfm>

<http://water.epa.gov/drink/contaminants/>

<http://www.cyber-nook.com/water/TasteOdor.htm#color>

<http://water.epa.gov/drink/guide/upload/book_waterontap_full.pdf>

1. Using some of the resources given, find the information to fill in the chart below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Water Problem** | **Possible Contaminant** | **Source** | **Health Risk** | **Correction Measures** |
| Blue/ Blue-green color |  |  |  |  |
| Cloudy or milky |  |  |  |  |
| Reddish orange color |  |  |  |  |
| Dark brown/ black color |  |  |  |  |
| Yellow color |  |  |  |  |
| Soap scum |  |  |  |  |
| Spots on clothes |  |  |  |  |
| Spots on dishes |  |  |  |  |
| Coloring of teeth |  |  |  |  |
| Grittiness |  |  |  |  |
| Reddish/brown sediment |  |  |  |  |
| Bitter taste |  |  |  |  |
| Metallic taste |  |  |  |  |
| Salty taste |  |  |  |  |
| Chemical taste |  |  |  |  |
| Chlorine smell |  |  |  |  |
| Detergent smell |  |  |  |  |
| Sweet smell |  |  |  |  |
| Fish smell |  |  |  |  |
| Rotten egg smell |  |  |  |  |
| Oil/gas smell |  |  |  |  |
| Sewage smell |  |  |  |  |
| Musty smell |  |  |  |  |
| Gray stains |  |  |  |  |